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ISSN 0097-4463

# ANNALS of CARNEGIE MUSEUM

CARNEGIE MUSEUM OF NATURAL HISTORY

4400 FORBES AVENUE • PITTSBURGH, PENNSYLVANIA 15213

VOLUME 48

6 MARCH 1979

ARTICLE 1

## A NEW SPECIES OF *AMPHISBAENA* (REPTILIA, *AMPHISBAENIA*) FROM ARGENTINA

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### ABSTRACT

*Amphisbaena minuta*, new species, is described from *Larrea* habitat in the arid Bolsón de Pipinaco, Catamarca Province, Argentina, and other amphisbaenian records from the Province are reviewed.

### INTRODUCTION

The province of Catamarca, Argentina, has received relatively little attention from herpetologists. As part of a study of the convergent evolution of North and South American desert ecosystems, reptiles were collected (by ACH) in Catamarca during 1973, 1974, and 1975, principally in the western section of the province. Subandean western Catamarca is arid, and includes a northward extension of the Monte Desert (Blair et al., 1976). The topography consists of a series of isolated valleys, each surrounded by high mountains. The situation suggests great potential for development of local endemism in fossorial reptiles of low vagility. Among the reptiles collected in one isolated valley, the Bolsón de Pipinaco, is a distinctive new species of *Amphisbaena*. Terminology used follows the system of Gans and Alexander (1962).

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Submitted 14 August 1978.

***Amphisbaena minuta*, new species**

*Holotype*.—CM 65531, immature male, from 27 km S Andalgalá (Route 1), Provincia de Catamarca, Argentina, collected by Arthur C. Hulse on 12 January 1974.

*Paratypes*.—CM 65532, immature male, from the same locality as the holotype, collected 1 February 1974 and CM 65533, immature male, 17 km S Andalgalá (Route 1), collected 20 December 1973.

*Diagnosis*.—A small, slender *Amphisbaena* lacking major fusions of head shields; with greatly enlarged prefrontals (Fig. 1); 265 to 271 body annuli along the mid-ventral line; 17 to 19 dorsal and 20 ventral segments per midbody annulus; 22 caudal annuli; two rows of postgenial and one row of postmalar chin shields; four distinctly rounded precloacal pores. Body annuli in the postnuchal region cross the back at almost right angles, and caudal autotomy is present at the eighth caudal annulus. The head is not pointed, and the snout is blunt and rounded.

*Description of holotype*.—Dorsal body pigmentation is tannish brown. Anteriorly the pigmentation disappears at the lateral sulci, however, from a third of the length of the body behind the head to the precloacal annulus the pigmentation extends to the third annular segment ventral to the lateral sulci. Occasionally the pigmentation fades on the second, or extends to the fourth segment. Intersegmental raphes are always lighter than the centers of segments. Ventral coloration on the body is immaculate cream. Dorsal head coloration is light tan on the rostral and anterior portions of the nasals, but deepens to a brownish purple on the other dorsal head scales. As with the intersegmental raphes, the sutures between the dorsal head scales are light. Laterally the dark pigmentation fades on the upper third of the second supralabial. The remainder of the second, and all of the first and third supralabials are cream with scattered brown spots. The ventral surface of the head is immaculate white. Pigmentation of the tail is similar to that of the body.

The head is short and blunt, and the head scales lack major fusions. The snout is blunt, somewhat produced, and slightly flattened dorsoventrally. The rostral is barely visible from above, and is bordered by a pair of large nasals. The paired prefrontals are the largest head scales, and are about twice the size of the nasals. They are in broad contact with the nasals, frontals, second supralabials, and oculars. The posterior lateral margins form 45 degree angles. The frontals are small, about one-third the size of the prefrontals, and are located in the concavity produced by the posterior angles of the prefrontals. They are in broad contact with the parietals, and point contact with the oculars. Four parietals are present. Three and one-half supralabials are present. The second supralabial is the largest, and is in point contact with the nasal. The oculars are equal in size to the frontals, and cover large, distinct, darkly-pigmented eyes. The temporals are paired, in contact with the posterior half-supralabials, and of approximately that size. The second temporal is in narrow contact with the ocular on the right, but separated from the left ocular by the first postocular. A single postocular is present on the left side, but the postocular is divided into two scales on the right.

The mental is relatively small, slightly wider anteriorly than posteriorly. The postmental is pentagonal and slightly larger than the mental. Three infralabials are present; the second is the largest. The first row of postgenials, consisting of a pair of large, roughly triangular scales, separates the postmental from the malars. The second postgenial row is composed of five smaller scales. The malars are triangular and in broad contact with the second infralabials, and in narrow contact with the third infralabials.

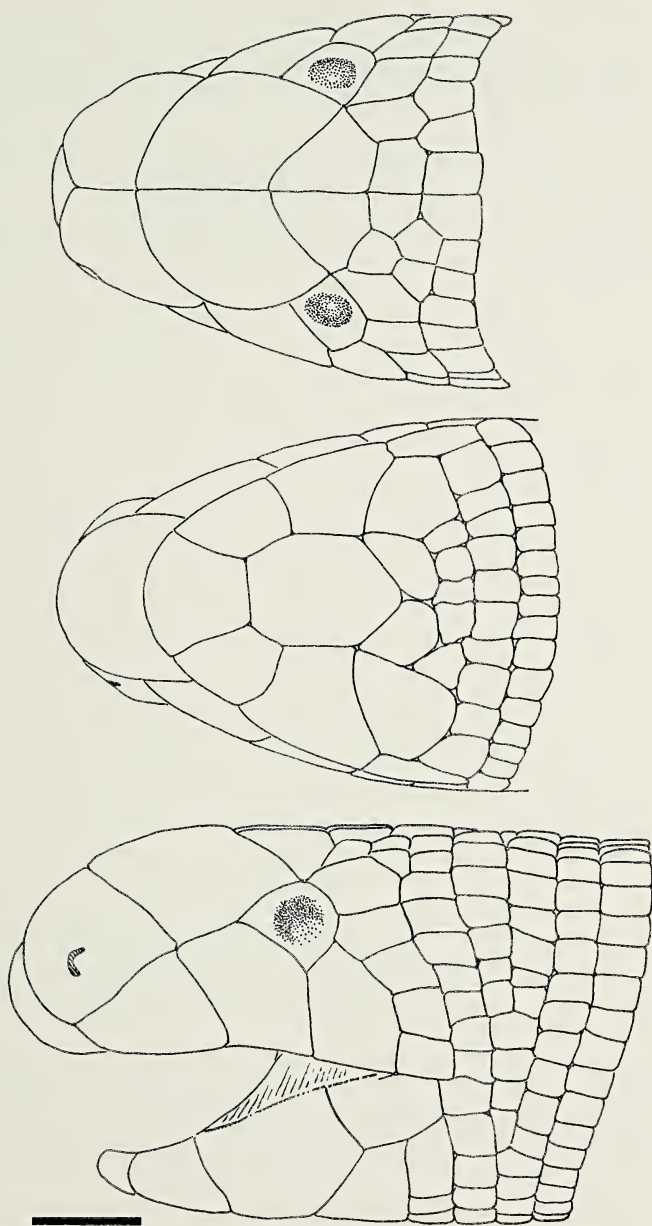


Fig. 1.—Dorsal, ventral, and lateral views of the head of *Amphisbaena minuta* (CM 65531, holotype). Scale bar equals 1 mm.

The first postmalar row is composed of 10 scales approximately the same size as the segments of the first body annulus. There are two accessory dorsal half-annuli between the first and second complete body segments.

Ventral annular segments are nearly as wide as long, but not significantly widened. In the area of the lateral sulcus the annular segments are approximately as long as they are wide. Middorsally the segments are three times longer than wide. Dorsal annular segments on the tail are only two times longer than wide. There is a prominent autotomy constriction at the eighth caudal annulus, where the tail is broken.

The body is cylindrical, and there is no nuchal constriction.

Scale counts are as follows: body annuli, 265; lateral half-annuli, 2; caudal annuli, 22; preanal pores, 4; annular segments at midbody, 39 (19 dorsal and 20 ventral); supralabials, 3½; infralabials, 3; cloacal segments, 6-4-6. Measurements are snout-vent length, 165 mm; diameter at midbody, 3.5 mm; tail length, 16 mm.

*Variation.*—The paratypes (CM 65532 and 65533) generally agree with the holotype in dimensions, coloration, and details of scutellation. Scale counts for the paratypes are as follows: body annuli, 271, 271; tail broken at eighth caudal annulus in both; preanal pores, 4, 4; annular segments at midbody, 39 (19 dorsal, 20 ventral), and 40 (20 dorsal, 20 ventral); supralabials, 3½, 3½; infralabials, 3, 3. Measurements are snout-vent length, 177, 165; diameter at midbody, 3.5 (both).

*Distribution and ecology.*—The five known specimens of *Amphisbaena minuta*, including two collected in 1974 that escaped before they could be preserved, were taken in bajada habitat in the Bolsón de Pipinaco. All were found alive at night (2100 to 2400 hours), on a paved section of Route 1, at 17, 20, 22, and 27 km south of Andalgalá. Roadside habitat in this area is typical northern Argentina flatland desert, with the dominant plant being creosotebush or *jarilla* (*Larrea cuneifolia*), and subdominants *Cassia aphylla* and *Trichocereus* sp. (see Fig. 7, in Williams and Mares, 1978). The soil is relatively loose and sandy. There was no obvious reason for increased amphisbaenian surface activity on the nights when specimens were collected.

M. A. Mares (personal communication) also collected a small slender species of *Amphisbaena*, presumably *A. minuta*, in the Bolsón de Pipinaco, and reported a large, robust species, possibly *A. camura*, from near Belén, in the northwestern part of the Bolsón. Mares' specimen, deposited at the Fundación Miguel Lillo, could not be found for verification of the tentative identification.

*Discussion.*—We are unable to reach convincing conclusions about the affinities of *Amphisbaena minuta*—by no means an unusual situation in this difficult genus (Gans and Mather, 1977:36). Although our specimens are immature, the body diameter/body length relationship suggests a very slender, relatively small species at maturity. The high annuli counts, number of preanal pores, moderate number of annular segments, color pattern, and head shape in combination distinguish *A. minuta* amply from all congeners. We at first thought the relationship of this species might be with *A. angustifrons plumbea* (*sensu* Gans

and Diefenbach, 1972), a poorly known Patagonian form. *Amphisbaena minuta* differs from *plumbea* in having caudal autotomy, postnuchal annuli crossing the middorsal line at right angles, and a higher number of body segments (maximum 218 in *plumbea*). Moreover, *plumbea* is a robust, heavy-bodied species with a pointed snout. We continue to regard the group of *Amphisbaena angustifrons* as the most likely relatives of *A. minuta*, despite the observed differences in character states. This section of the genus is in need of further study, because the present arrangement of species and subspecies is based on extremely sparse material from the vast geographic area of western Argentina and Patagonia.

In the most recent keys to the species of *Amphisbaena* (Gans and Diefenbach, 1970; Gans and Mather, 1977) *A. minuta* runs to *A. occidentalis townsendi*. This latter species, in contrast to *A. minuta*, has a distinctive color pattern of contrasting dorsal and ventral pigmentation, that appears mottled, and marked elongation of dorsal segments of the anterior trunk annuli (Gans, 1961).

The herpetofauna of Catamarca Province was first described by Koslowsky (1895), but he recorded no species of *Amphisbaena* from the area. Since that time Gans (1965) has reported *Amphisbaena angustifrons* (*angustifrons*) from Andalgalá and Esquina Grande, and *A. camura* from San Antonio and Catamarca (city). Gans (1966) cited *A. darwini heterozonata* from the Provincia de Catamarca, without specific locality. To these published records we can add *A. angustifrons angustifrons* from Camino El Alto (FML 431), and *A. darwini heterozonata* from Río Balcosna (FML 510a–510b). Although all three of these species are potentially sympatric with *A. minuta*, most of the records in the province are from the more mesic eastern section.

#### ACKNOWLEDGMENTS

Hulse's field work was supported by NSF grant GB-27125 to Dr. W. Frank Blair of the University of Texas, Austin for the Origin and Structure of Ecosystems Subprogram of the International Biological Program. McCoy's travel to Argentine museums was supported by the Netting Research Fund, Carnegie Museum of Natural History. For facilities and assistance we thank Dr. R. F. Laurent, Fundación Miguel Lillo, Tucumán (FML), and Dr. J. M. Gallardo and Sr. J. R. Cranwell, Museo Argentino de Ciencias Naturales, Buenos Aires. For loan of specimens we thank Dr. K. Kramer, Naturhistorisches Museum, Basel; Dr. G. R. Zug, National Museum of Natural History, Washington, D.C.; Dr. Ernest Williams, Museum of Comparative Zoology, Cambridge. We are particularly indebted to Dr. Carl Gans for helpful advice and comments on the manuscript. The type-specimens are deposited in Carnegie Museum of Natural History (CM).

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